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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BHAT, ADITYA S

ART UNIT PAPER NUMBER

2863

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,935

Applicant(s)

PATANIAN ET AL.

Examiner

Aditya S Bhat

Art Unit

2863

aw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,9,11-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 2,7,10 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6, 8-9, 11-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girbig (USPN 5,913,184).

With regards to claim 1, Girbig (USPN 5,913,184) teaches a method of determining performance impact of individual components of a power plant on overall thermal performance of the power plant, the method comprising:

- (a) designing a first thermal model of the power plant using original specification data of the power plant; (Col. 2, lines 4-35)
- (b) developing a second thermal model of the power plant from measured performance data of each component of the power plant; (Col. 2, lines 4-35) and
- (c) determining the performance impact of a selected component of the power plant on the overall thermal performance of the power plant by substituting design performance data of the selected component in the first thermal model with its measured performance data. (Col. 2, lines 4-35)

With regards to claim 3, Girbig (USPN 5,913,184) teaches displaying the performance impact of each component on the overall thermal performance of the power plant. (Col. 2, lines 15-18)

With regards to claim 4, Girbig (USPN 5,913,184) teaches i. receiving original specification data in a computer system; and ii. processing the specification data to design the first thermal model. (30; Col. 4, lines 37-47)

With regards to claim 5, Girbig (USPN 5,913,184) teaches

- i. measuring performance data of each component of the power plant; (Col. 2, lines 23-25)
- ii. storing measured performance data in the data acquisition computer; (Col. 2, lines 30-33)
- iii. receiving the measured performance data from the data acquisition computer in a processor system; and (Col. 2, lines 26-35)
- iv. processing data received in the processor system to design the second thermal model. (Col. 2, lines 26-35)

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With regards to claim 6, Girbig (USPN 5,913,184) teaches apparatus for determining performance impact of individual components of a power plant on overall thermal performance of the power plant, comprising:

means for designing a first thermal model of the power plant using original specification data of the power plant; (Col. 2, lines 4-35)

means for developing a second thermal model of the power plant from measured performance data of each component of the power plant; (Col. 2, lines 4-35) and

means for determining the performance impact of a selected component of the power plant on the overall thermal performance of the power plant by substituting design performance data of the selected component in the first thermal model with its measured performance data. (Col. 2, lines 4-35)

With regards to claim 8, Girbig (USPN 5,913,184) teaches means for displaying the performance impact of each component of the power plant on the overall thermal performance of the power plant. (Col. 2, lines 15-18)

With regards to claim 9, Girbig (USPN 5,913,184) teaches means for receiving original specification data; means for processing the specification data to design the first thermal model; means for measuring the performance of each component of the power-plant; and means for storing measured performance data. (30; Col. 4, lines 37-47)

With regards to claim 11, Girbig (USPN 5,913,184) teaches a computer program product comprising a computer useable medium having computer program logic stored thereon for enabling a processor in a computer system to process data, said computer program product comprising:

means for designing a first model using original specification data of a power plant; (Col. 2, lines 4-35)

means for developing a second model from measured performance data of each component of the power plant; (Col. 2, lines 4-35) and

means for determining the performance impact of a selected component of the power plant on the overall thermal performance of the power plant by substituting design performance data of the selected component in the first model with its measured performance data. (Col. 2, lines 4-35)

With regards to claim 13 Girbig (USPN 5,913,184). teaches means for receiving original specification data; and means for processing the specification data to design the first model. (Col. 2, lines 26-35)

With regards to claim 14, Girbig (USPN 5,913,184) teaches the developing means further comprises:

means for measuring the performance of each component of the power plant; and means for storing measured performance data. (Col. 2, lines 23-25)

With regards to claim 15, Girbig (USPN 5,913,184) teaches means for receiving the stored measured performance data; and means for processing received data to design the second model.

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With regards to claim 16, Girbig (USPN 5,913,184) teaches a computer-based method for providing assistance to a user of an application program for assessing the performance impact of individual components of a power plant on overall thermal performance of the power-plant, the method comprising the steps of:

- (a) using the application program to design a plant thermal model from original power-plant specification data; (Col.4, lines 50-65)
- (b) using the application program to design a matched thermal plant model from measured performance data of individual components of the power-plant; (Col. 2, lines 4-35) and
- (c) substituting design performance data, of a select component of the power plant, in the plant thermal model with its measured performance data. (Col. 2, lines 4-35)

With regards to claim 18, Girbig (USPN 5,913,184) teaches a computer-readable medium having computer executable instructions for performing the steps of:

- (a) designing a first thermal model of the power plant using original specification data of the power plant; (Col. 2, lines 4-35)
- (b) developing a second thermal model of the power plant from measured performance data of each component of the power plant; and (Col. 2, lines 4-35)
- (c) determining the performance impact of a selected component of the power plant on the overall thermal performance of the power plant by substituting design performance data of the selected component in the first thermal model with its measured performance data. (Col. 2, lines 4-35)

Girbig (USPN 5,913,184) does not appear to teach the substituting data.

Girbig (USPN 5,913,184) does describe the comparison of current operating parameters with a calculated model. (Col.2, lines 4-15)

It is well known to substitute data in a calculation to have flexibility on the design. Ex pane Masham, 2 USPQ2d 1647 (1987).

It would have been obvious to one skilled in the art at the time of the invention to modify Girbig (USPN 5,913,184) to include the process of substituting data to have flexibility on the design.

Claim Objections

Claims 2,7,10,and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

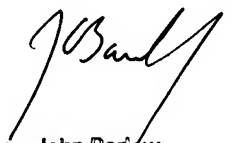
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Watanabe et al. (USPN 5,023,045) teaches a plant malfunction diagnostic method, Wang et al. (USPN 5,619,433) teaches real time analysis of power plant thermohydraulic phenomena, Baker et al. (USPN 3,879,616) teaches a combined steam turbine and gas turbine power plant control system, Martz et al. (USPN 4,455,614) teaches a gas turbine and steam turbine combined cycle electric power coordinated and hybridized control system and an improved factory based method for making and testing combined cycle and other power plants and control systems thereof.

.Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S Bhat whose telephone number is 703-308-0332. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-308-5841.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Aditya Bhat
December 15, 2003


John Barlow
Supervisory Patent Examiner
Technology Center 2800